

Protein Molecular Weight Standards (P-6649)

Quick Facts

Storage upon receipt:

- 4°C (short-term)
- -20°C (long-term)

Concentration: Each protein is present at
~60 µg/mL

procedures, this product should be handled as if it is capable of transmitting hepatitis or other infectious agents.

Application

Immediately prior to SDS-polyacrylamide gel electrophoresis, mix 2 µL of the protein standard with 8 µL of SDS gel-loading buffer,¹ heat at 95°C for 4 minutes and pipet into the well reserved for the standard. Larger samples may be required for low-sensitivity staining methods or when thick gels or wide sample wells are used. Figure 1 shows the band pattern when these standards are run on an SDS-polyacrylamide gradient gel, stained with SYPRO Orange protein gel stain and photographed through a SYPRO protein gel stain photographic filter.

Introduction

Molecular Probes' protein molecular weight standards include 11 proteins from 6500 to 205,000 daltons for use as molecular weight standards in SDS-polyacrylamide gel electrophoresis. The mixture is designed to give sharp, well-separated bands that serve as markers for estimating the molecular weight of proteins run in neighboring lanes of the same gel. The standards are appropriate for all fixed-percentage polyacrylamide gels or for gradient gels. Following electrophoresis, the bands can be visualized by staining the gel with any of Molecular Probes' SYPRO[®] protein gel stains. The SYPRO fluorescent protein gel stains provide the sensitivity of silver staining using very simple procedures. Proteins may also be visualized by conventional staining with Coomassie[®] Brilliant Blue or silver stains.

Materials

Contents

The protein molecular weight standards are sold in unit sizes of 400 µL. The proteins are provided in a storage solution that contains 10 mM Tris, pH 7.5, 300 mM NaCl, 100 mM dithiothreitol, 2 mM EDTA, 3 mM sodium azide and 50% glycerol. Each protein is present at a concentration of approximately 60 µg/mL. In most applications, 2 µL samples are appropriate; thus, each vial provides sufficient material for approximately 200 gel lanes.

Storage and Handling

For long-term storage, the standards should be kept at -20°C to prevent microbial contamination. For daily use, 4°C storage is recommended.

Transferrin is purified from human serum (MW = 80,000). The venous blood from which the human transferrin is isolated has been tested for the presence of Hepatitis B surface antigen (HBsAg) and HIV (HTLV II) antibody and was found to be negative for both. However, in accordance with good laboratory

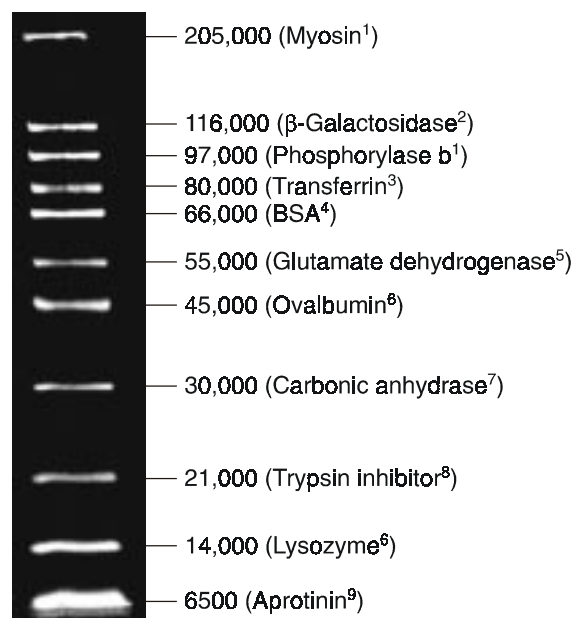


Figure 1. Molecular Probes' protein molecular weight standards. A 2 µL sample of the protein molecular standards was mixed with 8 µL loading buffer, heated at 95°C for 4 minutes and electrophoresed on an SDS-polyacrylamide gradient gel (4–20%; Bio-Rad Laboratories). The gel was stained with SYPRO Orange protein gel stain, illuminated at 300 nm with a Fotodyne[®] Foto/UV[®] 450 ultraviolet transilluminator and photographed through a SYPRO Orange/Red protein gel stain photographic filter using Polaroid[®] 667 black-and-white print film. Each band is labeled with its molecular weight and protein name. * MW = molecular weight. 1. from rabbit muscle; 2. from Escherichia coli; 3. from human serum; 4. BSA = bovine serum albumin; 5. from bovine liver; 6. from chicken egg; 7. from bovine erythrocyte; 8. from soybean; 9. from horse muscle; 10. from bovine lung.

References

1. *Short Protocols in Molecular Biology, Second Edition*, F.M. Ausubel *et al.*, Eds., John Wiley & Sons, New York (1992).

Product List

Current prices may be obtained from our Web site or from our Customer Service Department.

Cat #	Product Name	Unit Size
P-6649	protein molecular weight standards	400 µL
S-12012	SYPRO® Protein Gel Stain Starter Kit	1 kit

Contact Information

Further information on Molecular Probes' products, including product bibliographies, is available from your local distributor or directly from Molecular Probes. Customers in Europe, Africa and the Middle East should contact our office in Leiden, the Netherlands. All others should contact our Technical Assistance Department in Eugene, Oregon.

Please visit our Web site — www.probes.com — for the most up-to-date information

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